REMARKS

Overview of the Office Action

Claims 1-10, 12-14, and 16-27 were rejected by the Examiner under 35 U.S.C. § 103(a)

as being unpatentable over Lomet (U.S. Patent No. 5,870,763) in view of Luu (U.S. Patent No.

6,324,690).

Claims 11 and 15 were rejected by the Examiner under 35 U.S.C. § 103(a) as being

unpatentable over Lomet and Luu in view of Lewis (U.S. Patent No. 6,513,019).

In addition, the Examiner has noted that the Applicants must specifically "clear the term

'application dependency information among applications'" as "Claim 14 does not mention about

the dependency among with an agent executing on the system" (Office Action, page 9, lines 14-

16).

Status of the Claims/Amendments

Claims 1-27 are pending.

Claims Rejected Under 35 U.S.C. § 103(a)

In order to establish a prima facie case of obviousness, three basic criteria must be met.

First there must be some suggestion or motivation, either in the references themselves or in the

knowledge generally available to one of ordinary skill in the art, to modify the reference or to

combine reference teachings. Second there must be a reasonable expectation of success. Finally

the prior art reference (or references when combined) must teach or suggest all the claim

elements. The teaching or suggestion to make the claimed combination and the reasonable

expectation of success must both be found in the prior art and cannot be based on applicant's

disclosure. (MPEP §§ 2142, 2143.)

Regarding Claims 1-10, 12-14, and 16-27

Claims 1-10, 12-14, and 16-27 were rejected by the Examiner under 35 U.S.C. § 103(a)

as being unpatentable over Lomet (U.S. Patent No. 5,870,763) in view of Luu (U.S. Patent No.

6,324,690). However, Applicants respectfully submit that: (a) both Lomet and Luu lack any

suggestion or motivation, either in the references themselves or in the knowledge generally

available to one of ordinary skill in the art, to modify these reference or to combine these

reference teachings as the Examiner alleges; (b) there is no reasonable expectation of success

that the combination of Lomet and Luu could achieve the results of the claims of the present

Application; and (c) the combination of Lomet with Luu fails to teach all of the limitations

present in independent Claim 1, 16, and 22, upon which dependent Claims 2-10, 12-14, 17-21,

and 23-27 depend.

In regard to the first criteria—that there must be some suggestion or motivation, either in

the references themselves or in the knowledge generally available to one of ordinary skill in the

art, to modify the reference or to combine reference teachings, and that such a suggestion or

motivation to make the claimed combination must both be found in the prior art and cannot be

based on applicant's disclosure—Applicants respectfully submit that both Lomet and Luu lack

any such suggestion or motivation. The invention of Lomet is directed to a "method for making

applications recoverable from system crashes" whereby an "application state (i.e., address space)

is treated as a single object which can be atomically flushed in a manner akin to flushing

individual pages in database recovery techniques" (Lomet, Abstract, lines 1-6). However, as the

Examiner has acknowledged, "Lomet does not specifically mention about the application

dependency among applications" (Office Action, page 4, lines 15-16). Furthermore, it is

important to note that Lomet discloses that application operations are defined that produce

transitions between application states, that the application state is treated as a single object that

can be atomically flushed to the stable database, and that these operations are immediately

entered into the volatile log, and subsequently posted to the stable log (*see, e.g.,* Lomet, col. 6,

lines 7-22). In other words, application dependency among applications is not relevant to

achieve the end result sought by the invention of Lomet—the mapping of the application

execution into loggable operations such that the operation can be expressed entirely in terms of

the state of the application state—and thus Lomet effectively teaches away from any method in

which application dependency among applications.

In contrast, the invention of Luu is directed to "[a] technique for the remote installation of

application software from a source computer system to one or more target computer systems..."

(Luu, Abstract, lines 1-3) comprising "instructions for deinstalling application software" because

"[d]einstallation of application software is necessary for removing unwanted or outdated

applications from the user's workstation" (Luu, col. 2, lines 23-25). However, the installation

and deinstallation of applications has nothing to do with the state of an application while

executing (much less with preserving a pre-crash state), nor does it have anything to do with an

applications dependencies to other applications *while executing,* and thus Luu is not analogous

art to the invention of Lomet's system crash recovery method that is entirely directed to saving

the state of an application during execution. In this regard, it is not surprising that nowhere does

Luu even suggest that "making applications recoverable from system crashes" (to which the

invention of Lomet is directed) is in any way relevant to installation and deinstallation of

applications, and thus Luu lacks any suggestion to combine the teachings of Lomet with its own

teachings.

In regard to the second criteria—that there must be a reasonable expectation of success,

and that it must be found in the prior art and cannot be based on applicant's disclosure—

Applicants respectfully submit that both Lomet and Luu fail to provide any such reasonable

expectation of success. This is perhaps best evidenced by the fact that the separate

methodologies of Lemot and Luu are in fact incompatible—that is, the combination of the

inventions of Lomet and Luu would fail to produce the desired result which is to return the

computer system to a previous state. The invention of Lomet is directed to restoring a computer

to a specific, pre-crash state; whereas, in contrast, the invention of Luu, which merely alludes to

the installation and deinstallation of software applications, employs techniques that do <u>not</u> in fact

return a system to a pre-installation state, and there is nothing in either reference to suggest that

the invention of Luu could be modified to provide such functionality.

As known and appreciated by those of skill in the art, installation and deinstallation

methodologies are generally concerned with file- and file-based sharing—e.g., a DLL library or a

device driver—and the necessary tracking thereof, where components are installed with an

application only if the component does not already exist on the system, and components are

deinstalled only after all applications that share such components are removed. Consequently,

deinstallation of an application does not necessarily return the computer to a previous state

because such deinstallation does not necessarily mean that all components that were installed

with said application are in fact deinstalled. To illustrate this conclusion, consider the following

example: Application A is installed on a system, and said application requires Library X which

is not already present on the system and thus is also installed. Application B is then installed on

the system at a later time, said application also requiring Library X but, since this library is

already present, said library is not again installed. Finally, Application A is deinstalled but,

because Application B requires the presence of Library X, Library X is not deinstalled and, thus,

the computer system is not returned to a prior state because Library X (as well as Application B

for that matter) are still present on the computer system. For these reasons, the utilization of the

installation/deinstallation methodology suggested by Luu in conjunction with the invention of

Lomet would not succeed in returning the computer system to a prior state, and thus the

combination fails to provide a reasonable expectation of success.

Lastly, in regard to the third criteria—that the prior art references must teach or suggest

all the claim elements—Lomet and Luu, both individually and in combination, fail to teach or

suggest the element, as set forth in Claim 1, of "registering applications loaded in said computer

system with an application dependency application programming interface (API) for

communications of **application dependency information among applications**, a common

software agent, a storage component utilized by said agent and a backup service" (Claims, page

17, lines 4-7).

In the Office Action, the Examiner (presumably based on Applicants' arguments

presented in the response to the previous Office Action) has acknowledged that "Lomet does not

specifically mention about [sic] the application dependency among applications" (Office Action,

page 4, lines 15-16) and has cited Luu as providing this claim element. However, the invention

of Luu is directed to "[a] technique for the remote installation of application software from a

source computer system to one or more target computer systems..." (Luu, Abstract, lines 1-3)

comprising "instructions for deinstalling application software" because "[d]einstallation of

application software is necessary for removing unwanted or outdated applications from the user's

workstation" (Luu, col. 2, lines 23-25) and, as previously discussed, the installation and

deinstallation of applications has nothing to do with the state of an application while executing

(much less with preserving a pre-crash state), nor does it have anything to do with an

applications dependencies to other applications *while executing*. For these reasons, the Luu

reference, like that of Lomet, does not address application dependencies among applications in

any way that would pertain to applications while executing.

When any one of the three aforementioned criteria necessary prima facie case of

obviousness is not met, said references provide an insufficient basis for a finding of obviousness.

In the present case, Applicants respectfully submit that the combination of Lomet and Luu fails

to meet not just one but all three criteria. Therefore, in light of the foregoing arguments,

Applicants respectfully submit that Lomet and Luu, both alone and in combination, provide an

insufficient basis necessary to render the invention of Claim 1 obvious under 35 U.S.C. § 103(a).

Furthermore, the foregoing analysis, although presented in the context of Claim 1 of the present

invention, also applies to independent Claims 16 and 22 with equal force and validity, and thus

Applicants further submit that Lomet and Luu provide an insufficient basis necessary to render

the invention of Claims 16 and 22 obvious under 35 U.S.C. § 103(a) as well. Finally, given that

claims that depend upon an allowable claim are also allowable, and given that dependent Claims

2-10, 12-14, 17-21, and 23-27 depend on Claims 1, 16, and 22, the rejections as to Claims

Claims 2-10, 12-14, 17-21, and 23-27 under 35 U.S.C. § 103(a) are insufficient in view of Lomet

and Luu. Therefore, Applicants respectfully request that the rejection of Claims 1-10, 12-14, and

16-27 be withdrawn and that these claims be allowed to issue.

Regarding Claims 11 and 15

Claims 11 and 15 were rejected by the Examiner under 35 U.S.C. § 103(a) as being

unpatentable over Lomet and Luu in view of Lewis (U.S. Patent No. 6,513,019). However,

Applicants respectfully submit that: (a) both Lomet, Luu, and Lewis lack any suggestion or

motivation, either in the references themselves or in the knowledge generally available to one of

ordinary skill in the art, to modify these reference or to combine these reference teachings as the

Examiner alleges; (b) there is no reasonable expectation of success that the combination of

Lomet, Luu, and Lewis could achieve the results of the claims of the present Application; and (c)

the combination of Lomet, Luu, and Lewis fails to teach all of the limitations present in

independent Claims 1, upon which dependent Claims 11 and 15 depend.

In the Office Action, the Examiner acknowledges that "Lomet and Luu does [sic] not

specifically show the limitations of claims 11 and 15" (Office Action, page 8, line 19). The

inventions of Lomet and Luu have been previously described herein. The invention of Lewis, on

the other hand, is directed to "[a]n integrated financial data reporting system [that] provides for

real time data entry, assessment, and report generation" where "[t]he system includes message

formatting, database management, and select applications for preparing sophisticated financial

presentations in essentially real time" and wherein "[f]inancial institutions through the system

rationalize risk, performance, and compliance positions in a cost-efficient manner" (Lewis,

Abstract, lines 1-7).

In regard to the first criteria for finding a prima facie case of obviousness—that there

must be some suggestion or motivation, either in the references themselves or in the knowledge

generally available to one of ordinary skill in the art, to modify the reference or to combine

reference teachings, and that such a suggestion or motivation to make the claimed combination

must both be found in the prior art and cannot be based on applicant's disclosure—Applicants

respectfully submit that Lewis, just like Lomet and Luu (discussed earlier herein), lacks any such

suggestion or motivation. Simply stated, the invention of Lewis has nothing to do with an

application's dependencies to other applications while executing, and thus Lewis is not

analogous art to the invention of Lomet's system crash recovery method that is entirely directed

to saving the state of an application during execution (and vice versa), nor to Luu's invention for

the installation and deinstallation of software applications (and vice versa), and thus Lewis lacks

any suggestion to combine the teachings of Lomet and Luu with its own teachings.

In regard to the second criteria—that there must be a reasonable expectation of success,

and that it must be found in the prior art and cannot be based on applicant's disclosure—

Applicants respectfully submit that Lomet, Luu, and Lewis fail to provide any such reasonable

expectation of success. This is again evidenced by the fact that the separate methodologies of

Lemot, Luu, and Lewis are in fact incompatible—that is, the combination of the inventions of

Lomet, Luu, and Lewis would fail to produce the desired result which is to return the computer

system to a previous state. The invention of Lomet is directed to restoring a computer to a

specific, pre-crash state; the invention of Luu alludes to the installation and deinstallation of

software applications and employs techniques that do not in fact return a system to a pre-

installation state; and the invention of Lewis is directed to an integrated financial data reporting

system, and thus there is nothing in any of these references to suggest that the invention of Lewis

could be modified to provide "system crash recovery" functionality when (as previously argued

herein) such functionality is absent in the Lomet and Luu.

Lastly, in regard to the third criteria—that the prior art references must teach or suggest

all the claim elements—Lomet, Luu, and Lewis, individually and in combination, fail to teach or

suggest the element, as set forth in Claim 1, of "registering applications loaded in said computer

system with an application dependency application programming interface (API) for

communications of **application dependency information among applications**, a common

software agent, a storage component utilized by said agent and a backup service" (Claims, page

17, lines 4-7).

In the Office Action, the Examiner (presumably based on Applicants' arguments

presented in the response to the previous Office Action) has acknowledged that "Lomet does not

specifically mention about [sic] the application dependency among applications" (Office Action,

page 4, lines 15-16) and, as previously argued herein, Luu similarly fails to provide this

limitation. Similarly, the invention of Lewis has nothing to do with the state of an application

while executing (much less with preserving a pre-crash state), nor does it have anything to do

with an applications dependencies to other applications while executing. For these reasons, the

Lewis reference, like that of Lomet of Luu, does not address application dependencies among

applications in any way that would pertain to applications while executing.

When any one of the three aforementioned criteria necessary prima facie case of

obviousness is not met, said references provide an insufficient basis for a finding of obviousness.

In the present case, Applicants respectfully submit that the combination of Lomet, Luu, and

Lewis fails to meet not just one but all three criteria. Therefore, in light of the foregoing

arguments, Applicants respectfully submit that Lomet, Luu, and Lewis, both alone and in combination, provide an insufficient basis necessary to render the invention of Claim 1 obvious under 35 U.S.C. § 103(a). Therefore, given that claims that depend upon an allowable claim are also allowable, and given that dependent Claims 11 and 15 depend on Claim 1, Applicants respectfully submit that the rejections as to Claims 11 and 15 under 35 U.S.C. § 103(a) are insufficient in view of under Lomet, Luu, and Lewis. Therefore, Applicants respectfully request that the rejection of Claims 11 and 15 be withdrawn and that these claims be allowed to issue.

Regarding the Examiner's Note

In the Office Action, the Examiner has noted that the Applicants must specifically "clear the term 'application dependency information among applications'" as "Claim 14 does not mention about the dependency among with an agent executing on the system" (Office Action, page 9, lines 14-16). By this, the Applicants understand that the Examiner desires a clarification as to which term found in Claim 14 is equivalent and synonymous with this term as used in Claim 1 (among other places). In this regard, the Applicants respectfully submit that a single instance of "application dependency information among applications" is analogous and equivalent to the "one external dependency" that is known for the application in the first limitation of Claim 14.
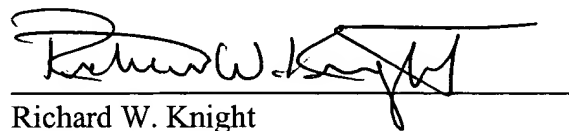
CONCLUSION

Based on the reasons and rationale set forth herein, Applicants respectfully submit that the objections and rejections have been overcome and/or traversed, accordingly, and Applicants request that the objections and rejections be withdrawn and that the claims be allowed to issue. Should the Examiner have any questions, comments, or suggestions that would expedite the prosecution of the present case to allowance, Applicants' undersigned representative earnestly requests a telephone conference at (206) 332-1394.

Respectfully submitted,

Date: <u>March 31, 2004</u>

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